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Foul Brood—Life History and Treatment.

[A pamphlet, "Foul Brood and its Treatment," has recently been issued from the pen of Thos. Wm. Cowan, editor of the British Bee Journal, and author of other works on the subject of bees. This little treatise begins by showing the importance of the industry of bee-keeping and the valuable service performed by the bees in the fertilization of fruit-bloom. The author then draws attention to the one great pest of bees—foul brood. After giving a historical retrospect, and the nature of the disease, he sets forth the life history, which I copy in full, as it shows what foul brood is, and what it looks like—both the appearance of the comb having the disease, and the disease germs themselves, as viewed from the microscope. So far as I know, there has never yet been a photograph of a comb of foul brood, and I take pleasure in presenting one, copied from the work above mentioned. Mr. Cowan says:—EDITOR.]

LIFE HISTORY OF FOUL BROOD.

"It will be necessary to give only a brief outline of the life history of *Bacillus alvei* to enable us to understand somewhat of the nature of this disease.

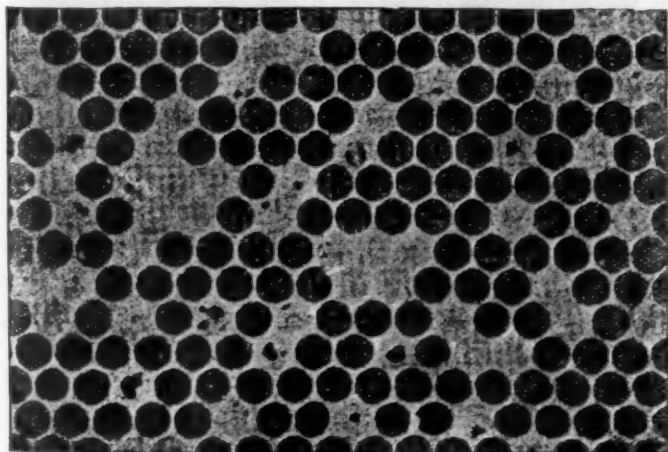


Fig. 1—Foul Brood in an Advanced Stage.

"*Bacillus alvei* is a pathogenic or disease-producing micro-organism, in form cylindrical or rod-shaped, and increasing by splitting or fission. The rods increase in length with

out growing thicker, and at a certain point divide and separate in two, to again increase, divide, and separate. Sometimes, in suitable nourishing media the lengthening of the rod is not accompanied by separation, but only by repeated division into longer or shorter chains of bacillus filaments, or leptothrix. The rods are also provided with a flagellum at one end, and are endowed with the power of locomotion. Under

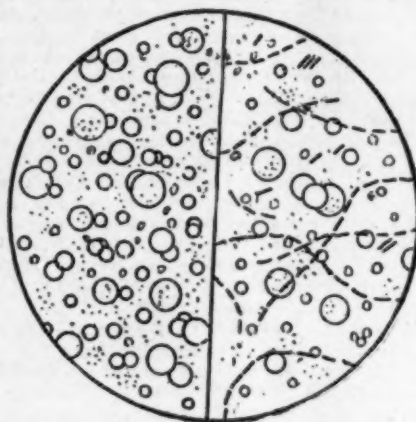


Fig. 2—Healthy Juices. Fig. 3—Early Stage.

certain conditions bacilli have the power of forming spores, in which case a speck appears at a particular point of the bacillus, which gradually enlarges and develops into an oval, highly refractive body, thicker but shorter than the original rod. The spore grows at the expense of the protoplasm of the cell, which in time disappears, setting free the spore. The latter formation closes the cycle of the life history of the bacillus. The spores—representing the seeds—retain the

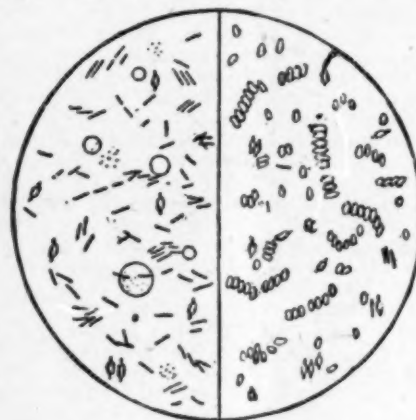


Fig. 4—Later Stage. Fig. 5—Last Stage.

power of germinating into bacilli when introduced into a suitable nourishing medium, and at a proper temperature, even after the lapse of long periods of time. At germination the

spore first loses its brilliancy, swells up, and eventually its membrane bursts in the middle. The inner part of the spore then projects through the opening, and grows to a new rod.

"The spores also possess the power of enduring adverse influences of various kinds without injury to their vitality, so far as germinating is concerned, even if subjected to influences fatal to bacilli themselves. The latter are destroyed at the temperature of boiling water, while the spore apparently suffers no damage at that temperature. Freezing also kills the bacilli, but not the spores. In the same way chemical reagents, completely destructive of the bacilli, do not affect the vitality of the spores. Carbolic acid, phenol, thymol, salicylic acid, naphthol beta, perchloride of mercury, and many other substances, even when considerably diluted, prevent the growth of bacilli, but have no effect whatever upon the spores. The great resistance of spores to high and low temperatures, to acids and other substances, is due to their being incased within a thick double membrane.

"There are certain chemical substances which evaporate at the ordinary temperature of the hive, and whose vapors, while not actually killing the bacilli, arrest their increase or growth. Among such substances are carbolic acid, phenol (or creolin), lysol, eucalyptus, camphor, naphthalene, and several others.

"If a healthy larva be taken, and a small quantity of the juice from its body spread on a glass slide be placed under the microscope, we shall see a number of fat-globules and blood discs (Fig. 2), among which molecules are in constant motion. If, on the other hand, a young larva diseased, but not yet dead, be treated as above, its juices will, when subjected to a similar examination, be seen to contain a great number of active rods swimming backward and forward among the blood-discs and fat globules, which latter, as will be noticed (Fig. 3), are fewer than those in the juices of a healthy larva. We shall also find, as the disease makes rapid progress, chains of bacilli—the leptothrix form—becoming common. In Fig. 4 we have a representation of a latter stage of the disease when the larva is dead and decomposing. Here the fat and albuminoids will be found disappearing, and the bacilli assuming the spore condition. In Fig. 5 we see the disease in its latest stage, when the whole rotten mass has become coffee-colored, or has dried to a scale. Blood discs, fat globules, and molecular movements have disappeared, only a few bacilli are seen, and at last, as the nourishing material becomes exhausted, only spores remain.

"It will now be understood that, owing to the great resistance of the spores, chemical substances have no effect at all upon them unless administered under such conditions as would destroy the bees. From this it will be seen how great is the difficulty in curing foul brood unless the disease is attacked in its early stages.

"It has previously been stated that adult bees are sometimes attacked by the disease. To prove this, it is only necessary to take a weakly bee on the point of death, and examine what remains of its fluids under the microscope, when a large number of active bacilli will be found. Such bees leave the hive to die, whereas the infected larvae remain in the cells, unless disinfectants to arrest decomposition are used, in which case the bees remove them from the hives.

METHOD OF TREATMENT.

"The superiority of the modern frame hive over the straw skep is here strikingly apparent. The latter was as a sealed book to its owner, who had no means of detecting the presence of foul brood except by outward signs, and these, as already pointed out, are only manifested when the disease is in its last and most virulent stages, at which time any treatment short of total destruction is entirely hopeless. The owner of a movable-frame hive, on the contrary, can, by the facilities it affords for examining the combs, at once detect the disease in its earliest stages, and adopt measures for arresting its progress, or for stamping it out altogether. Unfortunately the disease is seldom noticed on its first appearance; but it has nearly always to be dealt with when more or fewer spores are already in the hive.

"If, on examining combs to all appearance healthy, with brood compact and larvae bright and plump, we find here and there a cell with young larvae moving uneasily, or extended horizontally instead of being curled up, and changing to a pale yellow color, we at once detect the first symptoms of foul brood. The further progress of the disease can, at this stage, be arrested by feeding the bees with syrup, to which three grains of naphthol beta are added to every pound of sugar used. This is employed by the nurse-bees in preparing food for the larvae. We can further assist the bees by putting naphthalene or eucalyptus in the hive. The bees then usually remove the dead larvae.

"Apart, however, from experienced bee-keepers or trained experts, very few are fortunate enough to detect the disease at such an early stage, or to effect a cure so easily, and it becomes advisable to describe the method of procedure in ordinary cases—that is, when the combs have irregular patches of brood, with sunken and perforated cappings to the cells (Fig. 1) containing the coffee-colored mass inside.

"If the colony be weak, destruction of bees, combs, frames, and quilts, together with thorough disinfection of hives, is by far the best course to pursue. We thus destroy the spores, and so remove the source of infection. If, on the contrary, the colony be still strong, the bees may be preserved by adopting the following method: An artificial swarm is made of the bees, which are then placed in a straw skep and fed on syrup medicated with naphthol beta. The frames, combs and quilts are then burned. The hive is disinfected by being either steamed or scrubbed with boiling water and soap, and then painted over with a solution of carbolic acid (one part of Calvert's No. 5 carbolic acid to two parts of water), and when the smell has disappeared it will be ready for use. The bees are allowed to remain in the skep for 48 hours, by which time the honey they may have taken with them, and which may contain spores, will have been consumed, and the diseased bees will have died off. They are then shaken from the skep into a clean frame hive furnished with six frames, fitted with full sheets of comb foundation, and are fed with medicated syrup for a few days longer. The skep used as their temporary home should be burned. All such work should be done in the evening, when the bees have ceased flying for the day, to avoid chance of robbing."

□ [A careful reading of the method of treatment as above will make it very apparent why we, in our large experience with foul brood, could not effect a permanent cure of the disease by the application of disinfectants in the form of carbolic acid, salicylic acid, and the like. While we could kill the bacilli themselves with the antiseptics, we had no effect on the spores, which would hatch later, and, as a consequence, give rise to the disease again. We found it absolutely necessary to burn the combs, frames, and sometimes the hives, when it was not practicable to immerse them in boiling water.

Mr. Cowan's statements, based on his investigation with one of the best microscopes, agree exactly with our quite extensive experience with foul brood some years ago.

The starvation plan, in connection with burning the combs and frames, and boiling the hives, has worked best—altogether the best—in treating foul brood. It never re-appeared after such treatment, though it did in nearly all the cases where the hives were not boiled, thus confirming the theory or fact of the spores.—EDITOR.]—Gleanings.



Union of Bee-Keepers—Honey Adulteration.

BY C. P. DADANT.

The members of the National Bee-Keepers' Union are voting on the questions that were raised at the last meeting of the North American Association. It is necessary that we should all look at this matter from a more lofty standpoint than the consideration of small differences of opinion concerning a name, or a few changes in the Constitution of this or that Association, or the question of selecting a Board or an Executive Committee.

What we need—every one of us—is UNION. Therefore, whatever be the result of the present vote, let us all make up our minds, beforehand, that we will abide by the decision of the majority, whatever it be. One of the greatest traits of the American nation is the willingness of its people to bow before the verdict of the ballot. We saw it again last November, when the most excitable of politicians accepted quietly a verdict that upset their hopes. The bee-keepers of the United States need to unite as much as any class of men, whether they be laborers, or machinists, or capitalists. We have before us a dragon to exterminate—"ADULTERATION." It is worse than a dragon, it is a true hydra, with thousands of heads, springing up all over the United States, and when we think we have scared it away, it raises another of its ugly heads at our very doors.

The National Bee-Keepers' Union has done good work, but what it has achieved is nothing by the side of what it should achieve. The damage done to bee-keepers in a direct way, by swindling commission-men, by cranky neighbors, or by mistaken fruit-growers who consider the bee-keepers as enemies, is nothing compared to the damage done them all over the country by the sale on all the markets, of the lowest grade of glucose under the label of "honey." Is there a man among us who doubts that the sale of this shameful mixture under

the name of honey has lowered the price of honey at least one cent per pound? I believe I put it mildly when I say one cent. Then at this rate, the bee-keeper who produces 10,000 pounds of honey annually is being robbed of \$100 a year. The damage to all bee-keepers figures at millions. And in this reckoning, nothing is said of the damage to the public health, which is undoubtedly far greater than the loss that we sustain.

Years ago, a war was begun, by bee-keepers, against adulteration. In 1878 and 1879 a large number of petitions were sent to Congress by the bee-keepers, but to no avail. Yet it somewhat slackened the adulteration. To-day it is worse than ever. Yet, we can stop it, for it is against justice. All it needs is a sufficient effort.

We must, then, unite our efforts and construct a Bee-Keepers' Union fifty times as strong and as far reaching as what we have at present. Nothing need detain us. We have good men, plenty of them, who will do what we want, if we only give them the proper backing, both morally and financially.

Bee-keepers as a class are steady men. They are nearly all fairly well educated, most of them land-owners, and there are but very few unreliable men among them. Look about you, in all trades and professions, and see if you cannot make as respectable and reliable a gathering as any trade or profession.

I say, therefore, that we have the stuff, in our ranks, to form a Union that can command its place, and that can dictate to those who try to swindle us, directly or indirectly. All we need to do, is to convince ourselves that union is needed not only among the hundreds, but among the thousands of us.

Therefore, I beg you all to unite as one man on the decision of the majority. Give the "Union," whatever be its name, the backing of your vote and of your name. Consider that morally and financially it can do you more good, a hundred fold, than it will cost you. Let us all unite for the common good, and crush the hydra of honey-adulteration.

Hancock Co., Ill.



The Question of Amalgamation Considered.

BY PROF. A. J. COOK.

I regret exceedingly that there seems to be so much feeling on the matter of uniting the National Bee-Keepers' Union and the North American Bee-Keepers' Association. It seems to me exceedingly important that all bee-keepers should hold together and not let anything separate them. I have my own notions regarding the wisdom of this union which I will proceed to give; but in case a majority of bee-keepers think otherwise, I should at once fling my own opinion to the wind and heartily co-operate with those who think differently.

It seems to me that the North American and the National Union have entirely different purposes, and I can see no special reason why they should be united. I think a good many people have a wrong view of the North American. They notice each year the comparatively small attendance which is for the main part wholly local, and they conclude—very unwisely, I think—that the Association is of small account. Our country is so immensely large, times of late so hard, and traveling so expensive, that it is impossible for any considerable number to attend such conventions where they are National; especially when devoted to any industry with such limited profits as those of bee-keeping. We may then rest assured that the meetings of the North American Association can be, will ever be, only of limited attendance. But are these meetings of small value? I have attended quite a large number in as many as seven or eight States, and I have always regarded these, as well as the many others that I have been unable to attend, as of great importance. In all these meetings there is always a sprinkling of our ablest bee-keepers from widely-scattered sections. Besides these, there is always a large attendance from the immediate locality of the meeting. We were so fortunate in Michigan as to have one of these meetings held in Detroit. We had at that meeting some of the best bee-keepers of Ontario, New York, Ohio, Indiana, Illinois, and some even from States much farther away, while the local attendance from Michigan was large. It goes without saying, that such a meeting will give a great impetus to bee-culture, not only in the immediate region, but throughout our country. We are always sure to get many new ideas, often from experts in the immediate localities which are often brought out prominently for the first time by such meetings. The editors are always at hand, and whatever is new and valuable, is sure of wide distribution. Thus I have never felt that such meetings lack in importance or value, and have always regretted to read or hear them referred to in a slighting manner. I believe that we can hardly over-esti-

mate the value of these meetings, if rightly conducted. I have had an exceedingly wide experience in connection with such gatherings, in both official and non-official positions.

I would have at such meetings all important subjects introduced by a brief essay never more than 20 minutes long—I would prefer ten—to be followed by a general discussion. I do not believe—and I have had wide observation—that this plan can be changed without detriment. It is not necessary that the person who writes the introductory address shall be present. Thus we may have representation from our ablest men, and, if desired, from every State. This makes such meetings anything but local, and I see no reason to be discouraged even if there are not more than 50 or 75 in attendance. I had the privilege of attending the Boston Society of Natural History for a considerable time, at two different periods. That Society has had a wonderful influence in developing science and quickening scientific research. Yet very frequently there have not been more than 15 or 20 in attendance at a meeting. No scientist would think of saying that those meetings were unimportant, or that that Society was a played-out institution.

Thus much for the North American Bee-Keepers' Association.

The National Bee-Keepers' Union, on the other hand, has an entirely different mission, which it has fulfilled with remarkable success. This is none other than to look after the interest of its members, and to see that they are not interfered with because of prejudice or ill-will. I do not see how any one can complain of the work of the Union. It started out with a prescribed purpose, and it has fulfilled such purpose promptly and with efficiency. Because of its work, already so well done, it seems to me now it may well have its scope broadened. I have long thought that it might well take up the matter of adulteration, and I see no reason why it should not also give aid in the way of marketing honey. If these two objects were added to its work and mission, I do not see how any of its members could reasonably complain regarding it.

When the matter of amalgamation was first broached, I was quite favorable to it; perhaps more than anything else because so many of my good friends, in whose judgment I relied, were favorable. I find, however, that there are a good many members of the Union who are not in accord with such action. It has seemed to me all along that this alone should prevent any change. As an organization it was formed with a specific purpose. Many members joined it, paid dues, and as a result quite a fund is gathered. It seems to me that in this case we have no right to make any change, except those who have given to this fund are nearly, or quite unanimous, in the matter. I cannot see how either the North American or yet the Bee-Keepers' Union are to be materially aided by a union of the two. Their purposes are entirely distinct, and while each may aid the other, and will certainly if successful, I do not see how each depends at all upon the other, or why they should be united. The Union has certainly done splendid work—has never been found napping; and so I can see no reason to advocate any change in its work and management, except to broaden its purpose as indicated above. It is certainly true that a large increase of numbers would give more funds, more influence, more power. But so long as we have several hundred dollars in the treasury, I do not see why such an argument should have very great weight. I fully believe that in case more funds are needed, and a greater constituency desirable, the same will be immediately forthcoming. Surely, with such a brilliant record behind it, and such ample fruits, we cannot expect any lack of patronage.

From the above considerations I have concluded that the time is not yet ripe for amalgamation. I do believe, however, that we may well amend our Constitution, if it is necessary, so as to take up the other two matters of adulteration and marketing.

There is another question that seems to be causing some discussion and difference. I refer to the matter of General Manager. I have always been a hearty advocate of the doctrine of civil service reform. This doctrine demands the continuance of a person in office—if I rightly understand it—as long as he proves efficient. I see, therefore, no reason why our present able Manager should be superseded. Were he to be superseded, I certainly should give my vote and influence in favor of Dr. C. C. Miller. I doubt if a better man for the position could be found if we searched the world over. I am fully mindful of the objection made to Mr. Newman—that his present home in California places him at a long distance from all eastern bee-keepers; and yet, our telegraph and railroad facilities so greatly bridge this distance that I do not feel that the argument is a very important one. The fact, too, that the majority of those in the Union are citizens of California; the fact of California's exceeding importance as a bee-keeping

State, and the fact that she has already inaugurated an Exchange system, makes it somewhat appropriate that the Manager should be a citizen of California. I see no reason why prosecutions against adulteration could not be carried on from California as well as from Chicago, or New York. St. Louis, Cincinnati, Chicago, New York, Boston are all important markets and centers of honey distribution—surely, no Manager could exist in all of these places. Why, then, may he not as well live in San Francisco, the chief city of perhaps the most important honey-producing State in the United States?

These are my reasons for voting for the continuance of Mr. Newman in office. If the majority of those in the Union believe that Chicago should be the home of the Manager, and that Dr. Miller is the more suitable man, I shall be entirely satisfied, and work as heartily for the Union and its interest and success as I have done in the past. Whatever may be the result, I sincerely hope that all discord and bitterness will be avoided. We are living too late in the world's history to allow inharmoniousness to come into our ranks. I believe that one of the greatest and most important things to-day, not only in the bee-keeping industry, but in all industries, is for the people engaged to work together. Let us all work energetically to carry our point, if we deem it important, and then when a decision is given let us all fall into the ranks and work as one man to accomplish what is desired, and in the way which the wisdom of the majority points out.

Los Angeles Co., Calif.



Something from a Foreign Bee-Paper.

BY CHARLES NORMAN.

Number 12, of the Leipziger Bienenzeitung, came to hand, and a few items from it may be of interest to your readers.

BLACK BEES PREFERRED IN MANY COUNTRIES.

Tho not a few German bee-keepers handle the Italian, Carniolan and other foreign bees, yet in the north and middle Germany, at any rate, the preference is given to the common black bee. The German bee-keepers being anything but backward people, there must be some quite good reason why they thus differ from us who have very little use for the black bees—the more so because our winters in the Northern States are colder and severer than winters over there. To me the reason seems to lie in that our summers are so very hot. The Italian bee is the bee of a warmer climate, and as our climate, in spite of our extreme winters, is a warmer one on an average than that in north and middle Germany, in many parts of France, Switzerland, Austria, and so on, the Italian bee suits us, while they, with their pretty cool, but so far even and equal climate, "go in" for the black bee.

THE PROPER WARMTH OF A BEE.

That renowned Polish bee-keeper, Dr. Ciesielski, conducted some further experiments to find out the proper warmth—not of a whole colony (we know enough in this particular)—but of the single bee. He used exceedingly fine thermometers, made for the purpose. Inducted into both thorax and abdomen, they showed 28°, Reaumur; inducted into the abdomen alone, the stomach being filled with honey, there were 20°, Reaumur. Pastor Fleischmann, who reports this, received his information from some Polish-German bee-keeper. Fleischmann says: "I myself do not understand any Polish, and shall certainly not learn it before I am able to pronounce the following sentence, which I copied when at Reichenberg, namely: 'strec przst skrz krk.' I presume I had better let the Polish alone. Younger ones may learn it. I won't."

Dr. Riehm says: "Any creature feels best in a temperature which is below its own warmth." Bees form clusters when the temperature is below 32°, Reaumur. At about 32° they begin to uncluster and to fan with their wings in order to remove the excess of heat. Therefore, the temperature about them should amount to some (not much, tho) below 32°.

A PAMPHLET ON FOUL BROOD.

Early in 1897 a pamphlet on foul brood will be published by Mr. Lichtenthaler, at Herdorf. Pastor Fleischmann, who read the manuscript, and who is a first-rate bee-keeper, who understands, positively asserts that foul brood can be cured without the use of any remedies, just by proper treatment, and that hitherto the real danger of infection and transmission has been sought for in the wrong place. Messrs. G. M. (Doolittle, I mean), R. L. (Taylor, I mean), E. R. (Root, I mean), etc., look out for said pamphlet! You smile at Mr. Fleischmann's "bold" assertion! Well, there are in Europe not a

few bee-keepers of note (among them Mr. Bertrand, of La Revue Internationale, and Mr. Gravenhorst, of the Deutsche Illustrierte Bienenzeitung) that are strong advocates of curing foul brood.

PASTEBOARD FOR WINTER PROTECTION.

That kind of pasteboard which serves for covering roofs and the like is used by some to protect their colonies in winter, because "it not only keeps warm, but is highly resistant to the influence of temperature."

A HONEY-PLANT OF HIGH RANK.

L. Ehrhardt speaks of "*Hydrophyllum Virginianum*" as being a honey-plant of the highest rank, being much better than even lindens. He distributes seeds *gratis*, which shows that he is not "interested" in what he says. Will some one of our botanist bee-keepers, or bee-keeping botanists, enlighten us regarding said plant?

HAND-PRESSES FOR FOUNDATION MAKING.

There are several kinds of hand-presses to make foundation with, in use in Germany, Austria, Switzerland and France. Were not the duty, the freight, and the middlemen's commissions on them so very high, many of us over here would, no doubt, buy and use the one or other of them. Something should be done to also have them manufactured in our own country. It is quite a saving to the bee-keeper to make his own foundation.

FOREIGN HONEY-EXTRACTORS.

As to honey-extractors, some of those which are in use in Europe are, I apprehend, ahead of ours. Whilst our extractors hold either two or four frames, there are some there that hold three frames, standing triangularly in the can—quite an improvement on the two-frame machines—and not requiring a larger can than the latter. Furthermore, whilst our extractors have the gearing on top of the can, some German extractors have it at the bottom, and the top is completely open and unobstructed—nothing is in the way of placing the frames in the can, and lifting them out. Finally, most of the German extractors have three iron legs with eyes in them to screw them to the floor, so that there is not a particle of shaking when the extractor is operated.

BEESWAX A "CORN" CURE.

Are you troubled with corns? Warm some pure, unbleached wax, so that it is soft and adhesive, and can easily be kneaded. Spread it on a very small piece of paper or white linen, just large enough to cover the corn. Let it lie for three to four days, when, as a rule, the corn will be so softened that it can be completely removed. If not, use a similar plaster for the same length of time, when success will be certain. Before applying the remedy, take a foot-bath.



That 12th Annual Union Report.

BY C. THEILMANN.

FRIEND YORK:—After reading the General Manager's 12th Annual Report over again, and comparing the New Constitution (which he criticises) with the old, or the authority he is taking in my case, I can hardly see any use at all to make, or to have, a Constitution. Any number of men can join together and select one of the lot to whom they pay the money, and let him use it as he sees fit without any examination of the finances by any one, but just accept the receipts and disbursements as he sets them forth. It seems to me if the Constitution of the old Union gives the Manager such rights, it needs revision more than the New Constitution, for the Treasurer of the new Union has to give bonds at least, while in the old Union it is only a trust.

I did not think that the General Manager could set forth such a shallow excuse, about myself being impulsive, and my case not being the "real issue." This is a very easy and cheap way to get out. I admit I am no slouch, but learned the good rule of the wise man—"What you want to do, do at once."

If the General Manager was located at Chicago, he would have been the first man I would have looked up; but living in California, I might have been in jail or dead before I heard from him, for it took several weeks before I got any answer after I appealed to him; and what good did it do me? Only to see in his Report my nicely-written-up trouble! I can tell you there is not much satisfaction in that, to an old friend and member of the Union ever since it started.

I would like to know what the General Manager means

by my case not being the "real issue." I think it was just the right case for the Union to assist—to show its value to every bee-keeper of note and the country at large; for no other case of our whole fraternity is spread as widely over the land as this one is. It was published in the daily and weekly papers almost everywhere, and would have helped to enlarge the membership of the Union materially, besides making some of the bad commission-men draw in their horns. We cannot always get a case where we can expect a victory at the end, likewise to constitute a precedent.

It begins to sound very shrill to my ears, when I am told that I must send my honey to good, reliable men, and not to unreliable. Who can tell us who is bad and who is good? Some men are good to-day and bad to-morrow. Being in Chicago a number of times, I posted myself somewhat, and think I know a number of good men, but if I have any honey to ship to Chicago next year, some of them may treat me just like Bartling did the past season; and to go there before I ship any honey is rather expensive. The rating of the commercial agencies is no longer any warrant, as can be seen in the cases of Wheadon and Shea. One of them was rated at \$35,000, and the other at \$45,000; and each has left his city now—the one from Chicago and the other from Minneapolis.

A good, strong Union would better matters; but reading the General Manager's Report, or pamphlet, it looks as if we were going to have two Unions—one in California and one further east, tho he does not say so right out in his last sentences. I hope that matters can be arranged understandingly, so as to amalgamate into one big Union.

I do not know why it is that our California brethren always claim a little more than their share, unless it is on account of their imagination. W. D. French claims that about one-fourth of the members of the Union live in California. I count 281 members on the present list, of which 39 live in California. One-fourth of 281 is 70¼, so they claim nearly double as many members as they really have on the list. It is the same way with their big honey crops, and if they do have a good crop, they can't find any other market than the Eastern States. If they would seek a market for their product outside of the United States, then their Honey Exchange would have a right to brag; but the way it is, I can see no advantage to their Eastern brethren.

Wabasha Co., Minn.



Are Bees Domestic Animals?

BY F. L. THOMPSON.

In the course of some committee work it became desirable to find out whether bees could with propriety come under the provisions of certain statutes relating to domestic animals, or whether the only way to secure the benefit of said statutes would be to pass new ones specially relating to bees. For this purpose I mailed a letter to our State Attorney, asking him the question, and also presenting the following facts for consideration:

"A colony of bees is in every practical respect on the same footing as a sheep, a steer, or a horse. It is a recognized piece of property, has a definite market value (from \$2.00 upwards), is subject to contagious diseases, and is individualized. It does not run wild any more than steers or horses do when left to themselves, and even then this 'running wild' is confined to the offspring (swarms), the old colonies invariably being stationary; and to a very limited portion of the year. And this 'running wild' does not affect the ownership of swarms, as long as they remain on the premises of the owner of the apiary; which they almost invariably do for a few hours or a day preparatory to leaving for good (when left alone). Aggregations of colonies (apiaries) furnish a number of men in this State their only means of support, and materially increase the income of many more. The facts that a single worker-bee is not individualized and has no value, and that a 'colony' is not an animal, are amusing sophistries, but have nothing to do with the practical aspects of the case. A colony is virtually an organism [no reference to Gerstung's theory]; its existence is dependent upon the individualized queen. Queens have a definite value (averaging one dollar), and a colony long deprived of its queen is worthless as a colony; it is not regarded as a commercial article, except for the honey or wax that may be in the hive."

His reply was: "The statutes must be construed with reference to their evident intention and purpose as well as to their language. In my opinion, the statutes concerning domestic animals do not, and are not intended to, include bees. I suppose statutes of a similar nature could be past, but I am satisfied that no court would construe the present

statutes on that subject in such a manner as to include the class of property mentioned."

Somewhat to my surprise my letter also got into one of our daily papers (how, I wonder?), and it and the request was written up in a vivacious style, accompanied by a cartoon representing our State veterinarian douching the tonsils of an invalid 9-banded bee (not at all what we meant to insinuate). The last paragraph read as follows:

"Mr. Thompson's letter nearly stumped me when I first read it," said Attorney General Carr. "I do not pretend to be a naturalist, and so I did not care to say whether or not the scientists class a bee among the domestic animals. On looking up the authorities, however, I felt compelled to decide against Mr. Thompson, so I wrote him, giving my opinion that in law a bee is not a domestic animal." (Note, however, that I did not touch on the "scientific" aspects of the case.)

Now, far be it from us to desire that a statute should mean anything else than what it was honestly intended to mean. We will not break our hearts over that. But aside from this particular case, does it not seem desirable that bees should be something in law? If not domestic animals in law, what are they? They are not wild animals, as I attempted to prove, and as the State Attorney virtually acknowledged, by his use of the word "language;" they are not products of the soil, or real estate, or inanimate objects; they are just property—but property that neither is nor represents any of those things, and yet is subject to taxation, would seem to be something of an abstraction. The headings of the newspaper article were: "When is a Bee Not a Bee? When it is a Domestic Animal, says Attorney General Carr." Must we stop at that?

Can readers of this journal inform us of any legal decisions on this point? It might be important, some time.

Denver, Colo.

Questions AND Answers

CONDUCTED BY

DR. C. C. MILLER, MARENGO, ILL.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Good Honey-Drink.

Please tell how honey-wine, metheglin and mead are made. J. B.

ANSWER.—I have no experience in that line, but here's a drink that I have found good: In half a glass of water stir a spoonful of fruit-juice and a spoonful of extracted honey; then stir in what bicarbonate of soda will lie on a dime; then stir in half as much tartaric acid, and drink at once. [As there are already too many intoxicating drinks made in the world, we hope our readers will not call for any more. At least we can't consent to use the Bee Journal to help along intemperance. We're "agin" the whole infernal strong-drink business.—EDITOR.]

Partly-Filled Sections—Cappings—Dividing—Feeding.

1. I didn't know what to do with my partly-filled sections for a time, and I have them on hand yet. I see it is advised to set them all out in the bee-yard at one time in the fall, and let the bees clean them out. Would it be best to do it at this time of the year, the first warm day when the bees fly? If not, what is best to do with them?

2. When honey is extracted, what is the best thing to do with the cappings? If they are put into a solar wax-extractor, how are the bees kept away?

3. I would naturally understand, on page 756 (1896), that a frame with all the adhering bees could be taken from each of eight hives, and be put into an empty 8-frame hive, with a queen-cell, and all would be harmonious, and as "strong as any in the apiary." Am I right?

4. On the same page another man says he feeds his bees

continually till the first of August. I understand from these words, that he makes it a rule to commence in the early spring and feeds a certain amount, according to his judgment, every day until the first of August or until the fall flow of honey commences. Am I right in this also?

C. G. B., Blue Rapids, Kans., Jan. 6.

ANSWERS.—1. The object of having the bees clean out the sections in the fall is so that there may not be the slightest remains of honey to form granules, for these granules will affect the new honey that the bees put in the following season. The probability is that it is too late now to do any good, for the honey has probably begun to candy before this, and when it is candied you can't count on the bees cleaning it out. If any of the sections are half filled, perhaps you can sell them at a sufficient price to make that the most profitable thing to do. If to use in your own family, you can probably do nothing better than to cut out all which contain any honey, whether much or little, pack in a crock and melt very slowly. Then when all has been melted and has again cooled, take the cake of wax off the top, and use the rest as extracted honey.

2. Better first rinse the cappings with water and use the rinsings to make vinegar. Then put them in a wax extractor. There's no trouble about keeping bees away—solar wax extractors are made bee-tight.

3. The reference is to a passage from the paper of N. E. France, in which he says: "As soon as the harvest begins, our colonies are very strong, often queen-cells started. We then divide them as we think best, taking from each colony from one to three or four brood-combs with adhering bees, and form new colonies on new stands, as strong as any in the yard." Mr. France is a man of whose practical ability I have a very high opinion, but I don't think he can make what he would call a strong colony simply by putting in an empty hive 8 brood-combs with adhering bees. But you will notice he doesn't say how many combs he puts in the new hive, and it may as easily be 16 as 8. If he puts only 8 in the hive, then he must mean that in time the colony will be as strong as any in the yard. Perhaps Mr. France will kindly speak for himself.

4. I suspect there's a screw loose somewhere about that report. Will Mr. DeLong tell us about it?

Drones Reared in Worker-Cells.

I had a one-frame nucleus, the comb being all worker-cells. The center of the frame was sealed brood, surrounded by unsealed brood, and around the unsealed brood were eggs. I took away the queen and these eggs hatch out drones. Can the bees change worker-eggs to drone-eggs? If not, how do you account for this? W. R.

ANSWER.—I don't believe workers can change the sex of eggs. It often happens that in her last days a queen becomes a drone-layer, and it is possible that she changed to a drone-layer about the time of laying those eggs.

Non-Swarming Bees—Questions.

I have a colony of bees that has not swarmed for seven years. They have not failed to store a surplus of 25 to 50 pounds of comb honey. Last year, when 40 colonies only stored 350 pounds, this one stored nearly 50 pounds of it. It can't be the location, nor size of hive. A colony whose queen is a full sister, sitting by the side of it, swarms every year. The hives are small, 8 frames, 10x12. The non-swarmers are in an old hive, which sits upon a box, and has not been moved in the seven years; the bottom has rotted, and the bees have eaten it out in channels running from front to back. In entering, they pass down into these channels, climb up the sides on the frames. I have been thinking of making a hive on the principle of this old one, and see if it will result in less swarming. My idea is to make a body 1½ inches deeper than the frames; immediately under each frame place a board the thickness of the bottom of the frame, standing on edge, so that each frame rests upon it, this board to be bored with holes the size of cells. This will leave quite a space beneath the frames that the bees can make no use of, except to cool themselves off in. I shall try this hive next summer with one of my strongest colonies. What do you think of the idea?

F. T. B., Virginia.

ANSWER.—I think well of the idea, only it is possible you might attain your end with less trouble. A colony with abundant entrance for air is less inclined to swarm than it otherwise would be. Raising the hive by putting an inch block

under each corner, leaving the hive open all around, can hardly be beaten for giving plenty of air. But don't hope that the plan you propose, or any other plan of giving plenty of air, will suffice to keep bees from swarming seven years, or even two years. I suspect that there may be something in the blood of that colony that prevents swarming, and you might do well to breed from it. That colony whose queen is a full sister, and which swarms every year, doesn't prove much. Suppose the queens of the two colonies were full sisters seven years ago. They probably met drones of different blood, so that the workers of one queen had only half their blood the same as the other workers. Allowing that the blood in the one hive remained the same (a very unlikely thing, for altho the colony did not swarm, the queen was probably changed once or twice during the seven years), the swarming colony would change half its blood every year on account of the young queen meeting a drone of different blood, so that in the fourth year only one-sixteenth of the blood would be the same, and in the seventh year only one part in 128!

A Question of Management.

I had three queens I wanted to save for another year with bees enough for a fair colony. I put one queen in the lower story and two queens in the upper story with a queen-excluder division-board. Now, what shall I do in the spring? I can separate, dividing the bees equally; if so, when? I can let them remain until they swarm, and get a large swarm, the queen in the lower story going with the swarm, then separate and have four swarms with one young queen. I can take out the two queens, making two nuclei, leaving most of the bees with one queen.

READER.

ANSWER.—The first thing to be done is to see how many queens are present in spring. If more than one, then something depends upon the amount of bees present. If all together there are only bees enough for one fair colony, let them alone till the numbers increase sufficiently to warrant taking away part, then take only as you can afford, always leaving the one strong colony.

Getting Bees from a Bee-Tree—A Bee-House—Spelling Reform—Sowing Sweet Clover.

1. A friend of mine and myself expect to cut a bee-tree in the spring. I am to get the bees and he is to get the honey. I have what I consider a very fine hive, that I make myself; it holds nine Hoffman self-spacing frames. I would like to know just how to proceed to get the bees from the tree into the box. I have never had any experience along this line.

2. I have a bee-house with the open side facing the south. When the weather got cold the past fall I put my bees into this house and packed them in chaff for winter. I just built the bee-house the past fall, and I expect to keep my bees in it next season. I have the hives packed almost together. I guess they are about two inches apart. Now, can I leave them that way next summer, if I put a board between each two, or will I have to move them farther apart? or would it be better to leave them as they are, and divide them off by twos with boards in front, and then have the entrance of the hive at the west open at the west, and its companion hive open at the east, taking it for granted that my bee-house faces the south?

3. I am teaching school. Do you think it would be advisable for me to teach the new rule for spelling, as described on page 8?

4. I want to sow some sweet clover this spring, and would like to know about what time to sow, and about how much to sow to the acre? We live in latitude 41¼°.

This is my first season in the bee-business, and I like it very much, and I find that the American Bee Journal is a great help to me.

E. M. L., Pennsylvania.

ANSWERS.—1. Circumstances vary so much in matters of this kind that about the best thing you can do is to take your common sense along, and let it guide you as exigencies arise. In some cases the tree can be carefully cut so as to disturb the combs very little, and a section of the tree containing the colony may be hauled home if desired. In other cases the whole business will be smashed to pieces, and you may do well to get the queen and part of the cluster in a hive or box with some of the broken combs. The bees will be more or less inclined to fly up to the place where their home was, but if the brood-combs be left on or near the ground, they will after a time give up and accept the inevitable. When they get set-

tled down you will find them generally little inclined to fight, or indeed to do anything. They have sometimes been hauled some distance in the section of the tree without being fastened or confined in any way, remaining in a kind of dazed condition in and on the log. If they are moved only a quarter of a mile or so, there is some danger that a few will return to the old spot. The rougher the treatment they receive in the felling of the tree the less trouble there will be about their returning to the old spot.

2. If you do not find it inconvenient for yourself, you can probably get the consent of the bees to have the hives close together in a straight row. Even if some of the bees enter the wrong hives, it will make little difference, for when a worker returns laden from the field, she is pretty sure of a kind reception in any hive. In one respect, however, there is danger, and that is with respect to young queens returning from their wedding-trip. Their entrance into the wrong hive generally means the ruin of the colony to which they belong. Some say that painting the entrances of the hives different colors will enable the young queen to identify her own home, and Sir John Lubbock has proved quite satisfactorily that bees distinguish colors. Something should be done to prevent the appearance of a straight row with all the hives looking exactly alike. Almost any object or objects in front of the hives will help in this regard. A tree growing close in front, a post before every second or third hive, anything to make one part of the row look different from the others. Your idea of having the hives in pairs will help much. It is practically making them twice as far apart as they otherwise would be. Putting a board between each two, as you suggest, will hardly do any good, but putting a board between each pair will. If there are as many boards as hives, and all looking alike, then there might as well be no boards.

3. It might not be the wisest thing to teach anything different from the text-books. People are very strong in their prejudices with regard to what they have already learned, otherwise it would be utterly impossible for such outlandish spelling as we have, to continue for a day. Let the scholars spell according to the spelling-book, but there will be no harm in your telling them that a movement has begun, and that many editors, college presidents, professors and others have stopt using "ed" for "t" in the last syllable of some words. Your patrons could hardly make any objection to your using the better spelling yourself, and when writing on the black-board.

4. Sow about the time farmers in your locality think best to sow red clover, putting it in a little deeper than red clover seed. It will be no harm to sow as thick as red clover, but less seed to the acre will do, as a single stalk of sweet clover covers a good deal of ground.

Comb-Honey Management—Paint for Hives.

1. In the July 30 and Dec. 31 (1896) issues of the American Bee Journal, Mr. J. A. Golden gives a plan for keeping both the colony and the swarm at work together in the surplus receptacles and preventing increase. What are the disadvantages if this plan as compared with the plan recommended and practiced by Dr. Tinker, and described by him in his work, "Bee-Keeping for Profit."

2. Do you think a paint made of hydraulic cement and skimmed milk would do for bee-hives? General LeDuc, once Commissioner of Agriculture, recommended this paint for farm buildings, and said that it is very durable. The color is said to be a creamy brown. The paint is made by mixing one gallon of sweet skimmed milk with a full quart (or a little more) of the cement. If the color is not objectionable, I do not see why this is not a good paint for hives. It is certainly very cheap. If I try it, I think I will paint the covers with ordinary white paint.

E. B.

ANSWERS.—1. After studying over the matter for some time, I am inclined to say I don't know, and leave Mr. Golden to make the answer, as being more familiar with this plan.

2. I have no practical experience in the matter, but from what I've read I have a favorable opinion of the material you mention. Generally the color of paint on a bee-hive makes little difference, for usually the hives stand in shade.

Keeping Sections Clean on the Hives.

Do you employ any other means than exact spacing and tight wedging to keep your sections clean? If so, I haven't heard or read of them, and would like to know them now. This staining of sections is a great bother with us toward the

end of the season, and altho we may scrape them, we can never get them to look "just right." Using tallow and other fatty substances has been suggested, but I feel a little doubtful about the effect such stuff would have on the nice, polished sections, and whether ink from the stamp would adhere to the wood. What do you know about these things? A. B.

ANSWER.—The tops and bottoms of my sections are not protected from the bees in any way. If taken off early in the season there is very little discoloration. If left on until after the honey-flow, the bees take great delight, apparently, in varnishing the whole surface with glue. But this varnishing period comes with a flow of darker honey, such as I don't want in sections, if indeed there is any flow at all. So when the flow of light honey stops there has been little varnishing done, and at that time all sections are generally removed, whether filled or not. I think there may be a good deal of difference in localities as to the amount of propolis gathered, but I am inclined to the opinion that in all localities the glue nuisance troubles less in the early part of the season than later.

Requeening an Apiary.

The queens in my new apiary are like the colonies—from good to bad. Would it pay me, do you think, to invest any money with queen-breeders? The reason I put it thusly is because I did invest last year, and the queen, which was a tested one from a very reliable breeder, certainly proved herself to be no better than some of the good ones I had. She either was nothing more than a hybrid herself, or mine are Italians, one and all. In case you should think it best to get new blood, I want to say that the first of May is the earliest I can get such queens on account of the cold in crossing the Continental Divide. Would queens do me much good procured at that time for the honey season which opens July 1, or earlier? You will understand that I couldn't afford to buy enough queens to requeen the whole apiary, but would have to breed from the bought ones.

COLORADO.

ANSWER.—I don't believe I'd try to get the stock changed in time to make any impression on the honey crop of next season. To do that you'd have to get the queens so early that there would be chance of much loss, and, besides, the new queens would cost more than later. With some of them there would be loss in introducing, and that would cut into the honey crop. Better wait till later in the season when queens can cross the Divide with more comfort and safety, procure one or several from which to breed, get some young queens bred from them in 1897, just what you can conveniently accomplish, but hold chiefly to the view that you are getting these new queens in 1897 so as to have them on hand in good season, and in good condition, to use in 1898. Of course, you would keep in mind all the time to suppress a poor queen whenever there was opportunity.

A New Binder for holding a year's numbers of the American Bee Journal, we propose to mail, postpaid, to every subscriber who sends us 20 cents. It is called "The Wood Binder," is patented, and is an entirely new and very simple arrangement. Full printed directions accompany each Binder. Every reader should get it, and preserve the copies of the Bee Journal as fast as they are received. They are invaluable for reference, and at the low price of the Binder you can afford to get it yearly.

The Alsike Clover Leaflet consists of 2 pages, with illustrations, showing the value of Alsike clover, and telling how to grow it. This Leaflet is just the thing to hand to every farmer in your neighborhood. Send to the Bee Journal office for a quantity of them, and see that they are distributed where they will do the most good. Prices, postpaid, are as follows: 50 for 25 cents; 100 for 40 cents; or 200 for 70 cents.

The Names and Addresses of all your bee-friends, who are not now taking the Bee Journal, are wanted at this office. Send them in, please, when sample copies will be mailed to them. Then you can secure their subscriptions, and earn some of the premiums we have offered. The next few months will be just the time to easily get new subscribers. Try it earnestly, at least.

Now is the Time to work for new subscribers. Why not take advantage of the offer made on page 45?

GEORGE W. YORK,

Editor.

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Editorial Comments.

The Wisconsin Convention meets at Madison (the State capital), Feb. 3 and 4—next Wednesday and Thursday. It is now our intention to be present, and we hope to meet and greet a goodly number of our readers in that great honey-producing State. We trust it may be the largest and best bee-convention ever held in Wisconsin. Why not be there and help to make it so?

They Would Exclude the Bees.—There is an agitation in the city of Riverside, Calif., to exclude the bees from that city. The point made by those who would drive the bee-keepers away is the old one, of bees injuring fruit. Prof. Cook had the privilege of speaking in that city recently to a large audience in one of the Farmers' Institutes. He pointed out as best he could the facts in the case. Here may be another case for the Union to put in its good work, and teach some people a lesson.

Petition Against Adulteration.—Mr. C. P. Dadant, in his article on page 50, refers to a petition against honey-adulteration, sent from bee-keepers to Congress in 1878-79. This matter was in the hands of Mr. Chas. Dadant (C. P.'s father), who received all the petitions from the bee-keepers of the country, and forwarded them to Washington. But the commendable work begun then seems not to have done any practical good, for we believe nothing more was ever heard of the petitions. But it was a start, and we believe if a strong national organization of bee-keepers were to undertake such an important thing, and follow it up closely all the way through, something would result therefrom. As Mr. Dadant says, bee-keepers need to *get together*, and push as one man for their rights.

The Proposed Amalgamation of the National Union and the North American will be decided this month, at least for the present. If it is defeated, we do not see that the National Union will have gained anything—in fact, it will prove a real loss to it, we believe.

Prof. Cook writes quite an article on this subject (see page 51), but we fail to see that he gives any good reason why amalgamation should not take place now; but, on the contrary, he says he is quite willing to work heartily for the success of the new Union if amalgamation carries. He also suggests that it would be well for the National Union to so amend its Constitution as to take up the subject of honey-

adulteration—one of the very important things that the New Constitution especially contemplates, though the General Manager, in his 12th Report, endeavors to discourage the undertaking of this matter, by saying it will take millions of money to fight the numberless cases that would arise all over the country. But we all know that we do not have to fight beyond the extent of the Union's treasury or financial ability—simply do what we can with the funds collected, to put down adulteration. That's all. And that is all the Union has ever done in the past—simply kept safely within its income in defending the pursuit of bee-keeping.

Prof. Cook, in common with some other enthusiastic Californians, entertains the wrong idea that the Union's members in that State are about "the whole thing," for he says: "The fact, too, that the majority of those in the Union are citizens of California." But he'll find it a hard matter to convince Eastern bee-keepers that only 40 members is a major portion of 280. When we went to school we were taught that 40 is as nearly as can be *one-seventh* of 280. To say the least, it doesn't look well for the "tail" to try to wag the "dog," even if it could, and tho the "tail" be a very useful and necessary part of the "dog."

While on this subject, we wish to speak of a matter suggested in the first paragraph of Mr. Theilmann's article on page 52. Now we do not think that there is a single member of the National Union who for one moment ever entertained the idea that the General Manager's brief annual financial statements were incorrect or not exactly right. And yet it would seem only fair that an itemized statement be given in each annual report sent to the members. Of course, it would be unnecessary to publish it in the bee-papers, but there is no question that the members would be interested in knowing just how much of the funds it was necessary to spend on each particular case in order to win it. We know the General Manager would be glad to do this, as it would be impossible for all to see his books for themselves, and thus learn it, as would be their right, if they so desired.

The members of the National Union have a perfect right to be proud of the work which that organization has accomplished in the dozen years of its existence, but there remains much more to be done in other directions that will prove of untold value to bee-keepers all over this country. As Mr. C. P. Dadant well says on page 50—we must "unite our efforts and construct a Bee-Keepers' Union fifty times as strong and as far reaching as what we have at present." This we believe can only be done by amalgamating the two existing national organizations, and then *all* go to work to "crush the hydra of honey-adulteration"—the bee-keeper's greatest foe in the pathway to success.

That Honey-Jumble Recipe.—From Gleanings we learn that the good women-folks that seem to "endure" so well living with Dr. Miller, have tried the honey-jumble recipe that we published recently, and Editor Root, after sampling them, says they are "as good as the best jumbles every made." (We'll have to take his word for it until we can afford to get a round-trip ticket to Dr. Miller's just for the purpose of eating jumbles with him! But we see the Doctor wrote Editor Root that he had sent him "the last of the batch," so that ends it!)

The following we take from the same editorial in Gleanings:

It seems there was a slight mistake, probably, in the recipe. One of the ingredients was carbonate of soda 4 ounces, and it appears that it should have been 4 *pounds*. The whole recipe, then, with this correction, will read as follows:

"Flour, 196 pounds; lard, 10 pounds; honey, 12 gallons; molasses, 3 gallons; carbonate of soda, 4 pounds; salt, 1 pound; water, 3 gallons; extract of vanilla, 1 pint."

Of course, the proportions in this recipe are too large for

domestic use; and for the convenience of the women-folks it is reduced to the following:

"Two pounds of flour; 1½ ounces of lard; 1½ pounds of honey; 6 ounces of molasses; ¾ ounce of soda; 1/6 ounce of salt; 1 gill of water; ¾ teaspoon of vanilla extract."

If the honey is not of heavy body, increase the quantity slightly. Perhaps the women-folks would prefer to have this reduced to "cupfuls;" but as such a measure is very indefinite, we can get at the result more exactly by giving the figures in pounds and ounces, and I suspect it is important that the proportions be as nearly exact as possible. I believe it would be possible to use all honey instead of molasses and honey.

If all the women-folks can succeed as well as Dr. Miller's have done, this recipe is going to be of great value to bee-keepers. Every bee-keeper who has honey to sell ought now to be able to offer to his customers honey-jumbles, home-made, and they will sell like hot-cakes.

It might be well to call attention to the fact that jumbles will keep almost indefinitely. Indeed, they seem to improve with age. If they get a little dry, shut them up in a bread-crock, and then see how moist they will become.

California Orange Honey.—Prof. Cook, while visiting Riverside a short time since, secured a fine sample of orange honey. The comb was white and the honey delicious. It is to be regretted that the orange honey comes there so early in the season. The bees at this time are so few in numbers that the product from this source can never be very large or important commercially. If the honey could be produced in large quantities, it would rival that of the sage, white clover, and the linden. So writes the Professor.

The Weekly Budget.

EDITOR THOS. WM. COWAN, of the British Bee Journal, and his good wife, are spending the winter in Placer Co., Calif., with their son.

MR. W. K. MORRISON, now residing on Bermuda Island, is suggested by Gleanings as a suitable person to go after *Apis dorsata*, if it is thought best to secure these bees for trial in this country.

MR. EDWIN BEVINS, of Iowa, wrote recently: "I am getting tolerably comfortable in health again, and hope to live to aid the new Union in its fight with honey adulterators and rascally commission-men."

MR. FERRIS E. GAINES, of Will Co., Ill., writes: "I like the American Bee Journal very much. There are frequently articles in it which alone are worth the subscription. The new spelling of some of the words ending in 'ed' is very sensible."

MR. C. P. MCKINNON, a bee-keeper near Marshalltown, Iowa, made us a very pleasant call recently. He has some 20 colonies, and runs for both comb and extracted honey, but mainly the latter. He sells his surplus in the home market at 10 and 12½ cents for extracted and comb honey, respectively.

MR. CHAS. KOEPPEN, a 5-out-aplary bee-keeper in Michigan, was pictured in the December Review, and also his 5 apiaries and honey-house. He has from 50 to 75 colonies in each apiary, and his crop of comb honey this year was about 8,000 pounds. He has achieved his present success through difficulties that would have disheartened a less persistent man.

MR. J. F. MCINTYRE, of California, is one of the largest bee-keepers in this country. Prof. Cook writes thus of him and his methods:

"I had the privilege, a few days ago, of spending a night with Mr. McIntyre, of the famous Sespe region, of Ventura County. Mr. McIntyre is not only one of the best bee-keepers in the United States, but he has one of the best apiaries, and one of the best plants that it has ever been my privilege to inspect. The apiary is located in a magnificent canyon. The hives are on a very gentle slope, and at the lower side is the extracting room. Mr. McIntyre has an extractor of his own

construction which holds a large number of combs, and which reverses while in motion. He works entirely for extracted honey. He has a large, fire-proof honey-house, and is so fore-handed that he can hold his honey until the market suits him: thus he is always able to get a good price for his product. He aims to keep about 600 colonies, and so manages as not to go beyond this number. After he reaches the desired number, he returns swarms to the hive, taking out the combs, to build up weak colonies. He thus has, at the dawn of the honey season, his 600 colonies all vigorous and strong. By this method of management he often takes over 30 tons of honey in a single season. I think his crop a year ago was about 32 tons. He reports that the bees just about held their own last year. Mr. McIntyre is very careful not to extract so closely as to endanger his bees from starvation."

MR. E. C. WHEELER, of Marshall Co., Iowa, wrote us as follows Jan. 3, about the prospects for next season in his locality: "I have much hope for the coming season, as white clover had a new start the past season, and we are having a fair amount of wet weather this winter."

THE DOWAGER EMPRESS FREDERICK, of Germany, takes great interest in all the occupations of country life, and has lately turned her attention to bee-keeping, which she considers a most useful industry for the peasant population. In order to encourage bee-keeping she has become the honorary President of the Weisbaden District Bee-Society. A subscriber sends us this bit of news.

HON. SYDNEY E. FISHER, the Dominion Minister of Agriculture, attended one session of the Ontario convention at Toronto in December. He delivered a very cordial speech, showing his interest in bee-keeping as a branch of the great work of his department. The bee-keepers of Ontario have much reason to be grateful to their Government for the substantial interest it takes in their pursuit. Would that our Government were as anxious to aid its bee-keepers.

MR. J. S. SCOTT, of Utah, wrote thus Jan. 9: "I gladly send you \$1.00 as the membership fee to the New Union, with the privilege of calling for any amount hereafter required to prosecute honey adulterators and other swindlers.... Talk about the home market! I think we produced in our three apiaries more comb honey last year than could have been sold in Utah for home consumption. Hence we are compelled to sell in the East.... I had the usual experience with swindlers last year—Wheaton and all the rest—but I did not bite."

MRS. A. J. BARBER, of Montezuma Co., Colo., we believe is the only woman bee-inspector on this continent. It is quite a distinction. She was appointed inspector for her county last spring, and has made a pretty thorough canvass of the bees kept in her domain. For thoroughness and conscientious work, commend us always to the good women. (This will not be construed as a reflection upon the splendid work done by Inspector McEvoy, of Canada, and others, for it is not so intended.)

PROF. COOK, in a letter from Los Angeles Co., Calif., which we received Jan. 16, said:

"While we have not yet enough rain to insure a good honey crop for the coming season, the outlook is very hopeful. We are already within one or two inches of the amount of last year, and have within half enough to make the outlook or prospects very favorable. Thus it is to be hoped that we shall have a good season in 1897, and that the Exchange will have plenty of work to do."

MR. J. J. MARSHALL is one of Wisconsin's large bee-keepers, as will be found by the following item, which appeared in a local newspaper:

"J. J. Marshall was here on business Monday. In company with L. Dalton, they took and sold from their bees, 18,500 pounds of extracted honey the past year. This means that they used about 60 ordinary barrels to hold it."

Mr. Marshall has been in the bee-business 8 years, and has had but one year of failure—that was 1893. He feels that adulteration of honey and dishonest commission men are to be dreaded far more than foul brood in Wisconsin. That may be true, and yet all deserve such laws that bee-keepers can help to enforce when necessary in order to protect themselves.

See "Bee-Keeper's Guide" offer on page 45.

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DR. GEO. LACKE, Newburgh, Ind.

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General Items.

Sweet Clover—Small Honey Crop.

I am in great hopes that sweet clover will be taken off the black list this winter. If you can help us any, I wish you would.

I had a small honey-crop, and got a small price for it, but I will stick to the Bee Journal. I have 97 colonies in the cellar at present, apparently doing well.

HENRY STARK.

Shawano Co., Wis., Dec. 30.

Season Good in Early Part.

I cannot get along without the American Bee Journal. Last season was very good up to July, when it slackened down considerably, but the fall flow helped me out again. I got 956 pounds of comb honey all together, and I had plenty of swarms through the latter part of May and June. I am wintering 52 colonies and 4 nuclei, which have plenty of stores, on the summer stands.

HENRY K. GRESH.

Elk Co., Pa., Dec. 29.

Honey-Plants Looking Well.

Bees are mostly in fine condition for winter, as what little honey they gathered the past season was gathered in the fall, after the fall rains set in, and most of the bees are strong in numbers and heavy in stores. All of our best honey-plants are up and looking well. If we can just have a few good rains the rest of the winter and spring the honey crop is assured for 1897. Long life to the American Bee Journal!

L. B. SMITH.

Lampasas Co., Tex., Dec. 29.

Abundance of White Clover.

It has been less than an average season here for honey, but the prospects are fine for next season, as we shall have an abundance of white clover.

I was quite successful with my exhibit at the county fair the past fall, securing three first premiums—on nucleus of bees, extracted honey and foundation, and second premium on comb honey.

F. S. TINSLEY, D. D. S.

Kankakee Co., Ill.

Results of the Past Season.

I think my bees have done well. I had been keeping bees in the box-hive for several years, and last spring I had 6 colonies. I then purchased 6 dovetail 10-frame hives, and put the new swarms into them, using half sheets of foundation. Not having an extractor, I had to build up 4 of them 4 stories high. I borrowed an extractor from a neighbor bee-keeper, and extracted 700 pounds from the 6 colonies—300 of white clover and 400 pounds of Spanish-needle; it was all fine honey. The white clover is in fine condition for next year. My bees are in good condition to go through the winter. They are hybrids, and workers, too. I have 9 colonies in dovetail hives, and three in the old hives. I owe my success to the Bee Journal, as I subscribed for it when I bought the hives. I couldn't get along without it now. I think the Editor has done a good thing in getting after the fraudulent honey commission men. I am well pleased with my first year's work.

W. L. SMITHEY.

Monroe Co., Mo., Dec. 30.

A Horticultural Bee-Keeper.

I have 30 colonies of bees, mostly hybrids. I am running principally for increase. I got only 400 pounds of comb honey this year, and yet I think this is a fair bee-country. Last spring I started with 14 colonies and increased to 30. They

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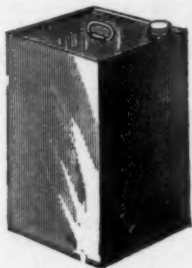
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all went into winter quarters heavy in stores. I am wintering them on the summer stands, the hives covered with short boards sawed two feet for the purpose. I keep the snow heaped up around the hives, leaving the entrances open. This has been my method, and it has worked well so far; so when a thing works well, that will do.

I am an old soldier, and must engage in some light out-door work. I have handled bees all my life. I have come up all the way from the hollow log hive to the improved hives of to-day, but I never thought of getting right down to business till within the last two or three years. I am horticulturally built, and also love to handle bees. I read Langstroth's book 30 years ago, but never until I saw the honey exhibits at the World's Fair did I get so interested in bee-culture as I have been since. I was there during the entire Fair, in charge of our horticultural exhibit. I am not afraid the bees will do me or my fruit-trees any damage. **S. W. MAXEY.**

Kittitas Co., Wash., Dec. 26.

Deep Snow and Windy.

I have three out-apiaries. I've had bees for seven seasons, the last being the best yet. My average from 142 colonies was 34 pounds per colony. I keep all my bees in dovetail chaff hives, except 26 that are in Bristol hives. I rear leather-colored queens, which are the best that I have tried, and I have tested quite a number. It has been snowing the past 48 hours; the snow is two feet deep on the level, and the wind is blowing hard, filling the roads with snow. **THAD. H. KEELER.**

Westchester Co., N. Y., Dec. 24.

Report for 1896.

I began in the spring with 14 colonies—blacks and hybrids. I had 6 swarms, and 300 pounds of basswood comb honey. There was white clover, also many wild flowers, but no nectar in them. Basswood trees were very full of bloom from the 1st to the 20th of June, but bees could work on it only one week, because it was too damp and chilly most of the time. Basswood is the principal dependence here, but alas! the woodman's ax is ruthlessly robbing us of this best of all honey-plants. I have been a subscriber only 1½ years, but I have learned to like the Bee Journal and the editor more and more. Long may they live to cheer the hearts of the bee-keeping fraternity, and battle for the right.

Platte Co., Mo.

R. T. ROSE.

"Honey Exchange" Suggestions.

I was considerably interested in the report of the Chicago convention. I am not a member of any organization, nor do I know that I shall connect myself with one. But it seems to me that the reason our bee-keepers failed to get returns for the honey shipped to the commission men, was not on account of a lack of organization on their part, but because they failed to use common sense in business, and know their men before making a consignment, either by letters of inquiry, or of reference. A man who will ship a carload of honey to an unknown firm, except through his advertisement in a paper or a richly worded and attractive circular through the mail, certainly comes short in his make-up, or, to express it in a more charitable and brotherly way, he is anticipating a hundred years hence, when in the Millennial Reign of Christ we are told that "the earth shall be filled with the knowledge of the glory of the Lord as the waters cover the sea."—Heb. 2:14.

A suggestion: It would seem to me that the most effective form of organization would be to have a common center, or "Honey-Exchange," if you prefer to name it such, in a central city, like Chicago. At that honey-exchange have a thorough business man, who is already associated with bee-keepers, located on a salary. His du-

ties shall be to keep posted through correspondence with bee-keepers—members of the Association in particular—in all parts of the country: 1st, the exact condition of the honey market in their particular locality; 2nd, the outlook of the incoming honey crop, especially as to its probability of congesting the local market, and here the exchange man can prove his ability, in such suggestions to shippers as will enable those living close to a congested market to ship to a locality where the yield is not so heavy that season; 3rd, by knowing how much honey each member has, or would have, for shipment, and with a knowledge of the consumption of each market annually, it would be more easy to get a uniform figure for the year's product, by judicious shipments; and, 4th, being in close touch with every large producer, and with producers living in every city, a knowledge of the commission men could soon be gained, that would lessen the losses through dishonesty.

These suggestions will bear enlarging, and, in fact, new ones may very profitably be added.

JOHN WILCOCK.

Philadelphia Co., Pa.

Report for 1896.

In the fall of 1895 I had 46 colonies in chaff hives, and wintered 39, but two were queenless. I increased to 60 colonies, artificially, and took 1,800 pounds of extracted honey—600 from clover, 1,100 from basswood, and 100 pounds from fruit-bloom. I fed 100 pounds of sugar for winter stores. How is that for Buffalo?

WM. H. MCKINLEY.

Erie Co., Pa., Jan. 9.

Not an Entire Failure.

I started in the spring of 1896 with four colonies of Italian bees, had one natural swarm, and 137 pounds of comb honey. We think it first-class, being from alfalfa and spider-plant, with a few wild flowers. My bees are in fair condition, wintering on the summer stands. I have been reading the Bee Journal for 15 months, and would not attempt to keep bees without it.

P. R. HOBBLE.

Southwest Kansas, Jan. 11.

Fair Season in 1896.

The honey season of last year was very fair in this vicinity. From four strong colonies, spring count, increasing to 10, I took off over 700 pounds of surplus honey, $\frac{1}{2}$ of which was No. 1 clover honey, the remainder first quality amber. From one young prime swarm I took 4 supers of 32 sections each, all prime honey, perfectly sealed, with the exception of one super in which there were 10 sections imperfectly sealed.

I put the bees into the cellar Nov. 6 in good condition. My bees are blacks—equally as good for their fighting qualities as their honey-gathering.

L. J. PECK.

Anoka Co., Minn., Jan. 11.

A Case of Swarming.

I practice clipping queens' wings in the spring, and did so last spring. When breeding was well started I found one hive that contained nothing but drone-brood, even in worker-comb. The queen was probably a very fine one, but probably reared late in the fall before, and not mated.

May 15 I hived a swarm on old combs, and placed it on the stand where the hive from which it came stood. June 23 a swarm came from it and returned, as I was away, and the old queen, being clipped, was probably lost, for on July 4 a swarm came from the same hive, and after pulling off the head of the drone-laying queen, I hived them in her hive, and all seemed well pleased. But what surprised me was to have a swarm come from the hive these bees came from, the three succeeding days, making four swarms from the same



This little picture will come home with telling force to many a tired and overworked farmer's wife, who has often felt that she could not longer stand the strain and who finally succumbed to disease. Poor woman! Do you not know that there is within your easy reach a remedy that will quickly restore you to health and happiness? A remedy that will positively cure

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hive, four days in succession, and I put them all, with the bees, with the drone-laying queen, and they all seemed satisfied and did good business in gathering honey. I have had something to do with bees for nearly, or quite, 70 years, but never knew a case like this in all my experience.

The last was a fine honey season here, and honey of excellent quality.
Rutland Co., Vt. E. L. HOLDEN.

Thinks Weevil Injure White Clover.

I see a good deal in the Bee Journal about bees not working on white clover. I think the reason is they cannot get the honey. It is there all the same. We find in almost every blossom a weevil which prevents the bees getting the honey. Before the weevil began to bother we got 3 to 5 bushels of seed per acre; now we get but $\frac{1}{2}$ to 2 bushels per acre.

SOL HARPER.

Mercer Co., Pa.

Good Results in a City.

EDITOR YORK:—I am glad to hear that the next national convention is to be held in Buffalo this year. I would like to have you call upon me when you come, and see my bees. They did very well last year. I started with 16 colonies and increased to 20. I extracted about 1,300 pounds, and took about 100 of comb honey. I think a crop like that is pretty good for being in the heart of a city like Buffalo.

I winter my bees on the summer stands, with outside cases, which are packed with straw and one thickness of burlap over the frames, with chaff cushions on top. I have lost but two colonies in three years wintered in the same way.

The bees had a good flight on New Year's day, and seemed to be in fine condition.

I think the Bee Journal is just what every bee-keeper ought to have, if keeping but 1 or 100 colonies.

M. M. RICKARD.

Erie Co., N. Y., Jan. 11.

[Thank you, Mr. Rickard, for your kind invitation. If we have time, and all being well, we should be very much pleased to visit you during the next convention.—EDITOR.]

An Experience with Bees.

A little more than 25 years ago (the last year of my living in New York before I moved to this State) I bought a colony of bees in a box-hive, and the experience I had that season, with that colony and one that came from it, is all I ever had until last spring, when, very much against my inclination at the time, I was obliged to take three colonies of bees—two good ones and one poor one—on a debt. I had never seen a frame of comb and bees taken from a hive, and didn't know one cell from another. But I thought I would make the best of my purchase, and try to get my money out of it. I found my old book—"Quincy on the Honey-Bee"—that I bought when I had the colony 25 years ago, which had been entirely useless all these years—and went to studying it. Then I subscribed for the American Bee Journal, which I also took 25 years ago, and to it I owe much of my success, for in every number I find something I need to know. When I had occasion to write to our good editor, I sent him the names of all the bee-men that I thought did not take our paper. All through the summer, and at the present time, let me work ever so hard on my farm, when Thursday night comes, and the Bee Journal with it—one as regular as the other—I never make a practice of retiring until I have finished the paper.

Last fall I got "A B C of Bee-Culture," and I was never before so interested in any business in my life. I had been in a very monotonous routine of farm work, for nearly 25 years, and this novel employment opened up to me a new department in the old world around me, that I had hardly ever noticed before, and I was delighted.

I also found, in reading the Bee Journal,

that I had entered a brotherhood, all allied in sympathies and interests, not so great in numbers as in extent of habitation, and all kindly disposed toward one another; and it strikes me that is an outgrowth of the business, that men who are engaged in investigating the works of the Creator, and work along with Him, become kindly disposed, and more and more in line with Him.

About the right time I got in correspondence with a good supply dealer, who furnished me with the necessary supplies, all of one pattern, 8-frame dovetailed hives. My old hives were of different shapes and sizes, were quite old and poor, and the combs very black. In the course of the season I got the bees all out of the old hives and piled them up by the woodpile. I transferred the bees all into the new hives, with new brood foundation. So now, instead of what I started with, in the spring, I have 10 good colonies, all on new combs, and in new hives, all of the same make, all painted white, and standing in a straight row, under the south side of a row of large locust trees, a few yards south of my house. I also got about 416 pounds of extracted honey, and 85 pounds in sections, besides quite a number of sections partly filled. The man of whom I got the bees helped me with his advice, and started me out, but nearly all the work was done by my own inexperienced hands, assisted, at times, by members of my family.

Pretty late in the fall I examined all the hives, and estimated that the lightest had about 22 pounds of honey, and the heaviest about 32. I put a Hill's device on top of the frames, then a piece of burlap, then an empty half story, and filled it with dry leaves, wintering on the summer stands; the hives are 18 or 20 inches apart. A little later on I took corn-fodder and laid it down straight on the ground against the north side of the row of hives, packing it down close, and piling it up as high as the tops of the hives. Then I took some more, and stood it on end, letting it lean against the other, and over the tops of the hives, having something the form of a shed over them. Then, going to the south side of the row, I packed the spaces between the hives with old hay, and partly covered the hay with stove wood, that it might not get out of place.

I think I have a good location. It is on the second bottom of the Big Blue river, near the base of the south side of a high bluff. My bees did nothing the forepart of the season—I had to feed to keep them from starving. Some who did not feed lost their bees. The surplus was stored between the middle of August and about Sept. 20 or 25.

C. G. BEACH.
Marshall Co., Kans., Jan. 6.

Bees Wintering Well.

I increase my bees from 21 to 41 colonies, and lost 2. I got about 600 pounds of comb honey and 200 of extracted—half white clover and half vine maple. I had a colony of Italians that swarmed May 26, and the new swarm swarmed June 26, and gave me 84 pounds of comb honey. Bees are doing well so far. M. A. BRADFORD.
Multnomah Co., Oreg., Jan. 9.

Bee-Keeping in Manitoba.

No doubt many readers of the Bee Journal consider Manitoba to be in the Arctic regions, and therefore no place fit to keep bees. To such I may say that I have kept them here for 10 years, and I find it a much better place for them than Old England, where I kept bees for 20 years, and had to feed some colonies each year or lose them. I have not had to feed one pound of syrup in Manitoba.

The season of 1896 was the poorest yet experienced here. Golden-rod failed to yield any surplus honey for the first time; and that and wild mint are the chief honey-flowers at present, there being no clover here yet except what I grow myself, which is only about one acre. We have no basswood. The honey is almost all from wild

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fruits and flowers at present. But I am looking for greater results from clover if the farmers could be persuaded to grow it. Alsike and white flourish well where sown. I saw bees visiting Alsike as late as October.

I winter my bees in an outside cellar or cave, the temperature of which is not nearly so high as bee-writers advocate. Last winter mine was from 3 to 14 degrees above zero most of the time, and every colony came through safely. I put 28 in, the beginning of November, and placed them all out the first week in April. One year they were gathering pollen April 4. Another year it was April 21 before I could put them out.

In this climate bees are not subject to dysentery; moths do not trouble at all, nor is there any honey-dew.

When extracting honey, about the end of September, I found a nice-colored queen upon the first frame taken out, which I set against the outside of the hive, and got hold of the next frame upon which was another queen, of a darker color.

J. GATLEY.

Manitoba, Canada, Dec. 26.

A Lady Bee-Keeper's Report.

There are about 500 colonies in this county (Montezuma). I have 150 colonies in two apiaries. Our home apiary of 65 colonies produced 8,000 pounds of extracted honey, altho I had to destroy 13 colonies and treat several others for foul brood. The out-apiary of 70 colonies produced 5,000 finished sections of honey, and 2,500 pounds of comb honey, in half-depth extracting frames, which we sell by the frame in the home market. Besides the comb honey, we have an increase of 17 good, strong colonies in the out-apiary. All have hives well-filled for winter use. Honey is cheap—best white sections, 3 for 25 cents.

MRS. A. J. BARBER.

Montezuma Co., Colo., Jan. 13.

Report for the Past Season.

I promise to report when I get a crop of honey. I can hardly call it a crop, but better than nothing. I took my 50 colonies from the cellar last spring alive—all but one or two—but they spring dwindled down below 40, and they were mostly weak. They commenced to build up on spring bloom, then in basswood bloom they did well for a few days, then all stopt until red clover bloom, then they filled up well for winter, all but two or three late swarms. I increased to 60 colonies, and packed 41 on the summer stands, the remainder I put into the cellar. All appear to be wintering well. Those out-doors have a jubilee occasionally—one on New Year's day. I think the prospect good for a good season in this part of the country. White clover has come in thick, and it appears to be wintering well.

The past year I got for my part about 700 pounds of honey, and have a major part of it on hand yet. It brings only 12½ cents per pound. For the most that I have sold I got 14 to 15 cents. A. F. CHOSBY.

Franklin Co., Iowa, Jan. 12.

Wild Parsnips Again.

On page 806, P. N., in referring to my article on wild parsnip, asks, "How long will tame parsnips have to run before they become poisonous?" Years ago, when I was a young man, I was told that if parsnips were allowed to grow a few years without being molested, they would become poisonous, and I supposed it was true until a few years ago one of my neighbors had a bed of parsnips in his garden, and the next spring he built a barn and enclosed the parsnip bed in his yard; but just outside of the fence a few parsnips came up and went to seed, and the seed was scattered, and they grew there to my knowledge 10 years or more, being self-sown, and they grew seed every year. One day the man told me if I wanted any parsnip seed

to help myself, for there was plenty of it. I told him that I had always been told that it was poison after growing wild as long as those had. He laught, and said that all the parsnips he had raised and ate for years was from seed he gathered from that place, so I got my seed from the same place for years, and raised good parsnips, and am alive yet, and never felt any bad effect from them.

Dr. Miller, in his answer to the above question, cites a case of a physician who had eaten a full meal of wild parsnip with no bad results. I can cite two cases where the result was quite different. One of my neighbors, while working in his field, pulled up a root of what is known here as wild parsnip, and gave to his horse. In a short time the horse was taken sick and died in a few hours. The other case, a young man picked up a root that he had plowed up, and ate some of it. In a few moments he was seized with a burning sensation in his throat and stomach, and severe pain. A physician was called, and he named it a case of poison from eating wild parsnip. I am satisfied from what Dr. Miller says, that there is no wild parsnip in the cases I refer to, but that it is some other root, therefore next summer I will send a sample of the plant to the Bee Journal, and ascertain its true name. There is one thing I do know—it furnishes a large quantity of excellent fall honey.

Stevens Co., Minn., Jan. 9.

Did Very Well Last Year.

I started in last year with one colony, and have now 23—a good many of which I got from trees. I did very well last year.

Napa Co., Calif., Jan. 14.

Kept Bees 20 Years.

I have kept bees for 20 years; with few years excepted they have been profitable. The past year has been almost a total failure. Through August they would have died had they not been fed. I have 34 colonies in my home yard, and an interest in another.

Watauga Co., N. C., Dec. 22.

A Very Poor Season.

We had a very poor honey season last year. From 32 colonies we did not get more than 400 pounds of honey, as the weather was too changeable. First we had too much rain, then it was warm, and then it changed to cold again. But we hope to have a better season this year.

Kings Co., N. Y., Jan. 12.

A Mexican Report.

Last year's honey season, as far as one can speak here about a honey season, was not so good as before. The rainy season was unusually long, and now we have remarkably long and wet Northerns. I have not seen such a wet year since I came here, five years ago. I am now preparing for the crop of orange and coffee honey—the most delicious in the world. They are beginning to bloom already, and most prob-

ably we will have a big crop from both for 1897.

I am trying, too, to explain modern bee-keeping to Mexicans through the agricultural paper, "El Progreso de Mexico." It is hard work for me, as I am a beginner in bee-keeping, and in Spanish language, but some time I hope to reap the fruits of my efforts. I am selling mostly extracted honey, which at present sells better than comb. I am now watching my bees for the bee-martin. I think they come down from the United States, as bees cannot fly there any more, and I only see them here in the winter months.

Orizaba, Mexico, Dec. 29.

A Colony in a Bedroom.

On Dec. 10, 1896, I bought two black colonies of bees in box-hives, transferred them to partly-drawn combs in dovetailed hives, which had no bee-bread. I took honey from box-hives, masht and strained it, thinned it with water and fed it. Dec. 24 I lookt into the hives and they had about 15,000 capped brood each. They are drawing out comb and building one new one, having it as large as my two hands. Every cell is worker. I keep them in a warm bedroom upstairs, where the stove-pipe goes through the room. I carry them out every warm day and give them a flight.

New York.

A Report—Sowing White Clover.

We have had a fine fall and no winter so far. Bees have a good supply of stores for winter, and gave us some dark honey in the supers. The dry, hot weather nipt the first crop. We do not have much chance for a good crop here in a dry year. We have had a good deal of rain this winter, and that will help out for next year.

I have just been reading Dr. Miller's answer to H. C., about how much white clover seed to sow per acre. I have sown clover seed for 40 years, and the best results come from sowing 60 pounds on 8 acres; that is 7½ pounds per acre.

Cowley Co., Kans., Dec. 31.

Results of the Past Season.

Out of 41 colonies I came through last winter with 40 medium ones, and increased to 73 by natural swarming. I got 1,200 pounds of comb honey in one-pound sections, and sold it in my home market for 15 cents, or if they take 100 pounds or more, 14 cents in trade, or 13 cents in cash, by the case of 24 sections. The dandelions and white clover did not yield any honey last spring, and the bees had all their old honey used up. I had to melt some sugar and feed a few new swarms. The last of June the basswood opened, and the first of July the bees filled their hives for winter, and stored some surplus, but no fall honey to speak of. I think they are wintering well, down cellar packed on top with leaves, with the entrances the same as on the summer stands.

Meeker Co., Minn., Jan. 1.

"Commercial Ratings" Unreliable.

EDITOR YORK:—I have kept track of your exposures concerning the Wheadon outfit, and also the Atchley's editorial relating to Wheadon's rating with Bradstreet's. Possibly what I have to relate may throw some light on the methods of a certain commercial agency:

A prominent druggist of this town, and a thoroughly reliable man, received a letter from a commercial agency, a few days since, asking him to send them a detailed account of the commercial standing of a certain business man of this place. They tendered no pay for the service asked, beyond a stamp for reply!

Our druggist replied that he was not in the business of writing up his neighbor's character, and that they would have to

seek elsewhere for the information required. In speaking of the circumstance to my husband, he said:

"They tried the same dodge on me three years ago, and got the same answer. What a contemptible system it is, though. Now, suppose I had been an enemy of this man, what an opportunity to have ruined his business reputation. On the other hand, had I been his most zealous friend, here was a chance for me to have given him a high, but false, rating."

To say the least, if this is the way the commercial agencies obtain their ratings, they are not to be depended upon, either one way or the other. Hence, "agency ratings" should themselves be rated for just what they are worth, and that is—nothing.

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HONEY and BEESWAX

MARKET QUOTATIONS.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, and so far as possible, quotations are made according to these rules:

FANCY.—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain, or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1 dark," etc.

Chicago, Ill., Jan. 19.—Fancy white, 12@13c.; No. 1, 10@11c.; fancy amber, 8@10c.; No. 1, 7@8c.; fancy dark, 8c.; No. 1, 7c. Extracted, white, 5@5½c.; amber, 5@6c.; dark, 4½c. Beeswax, 25@27c. Very little activity in the market.

Philadelphia, Pa., Dec. 31.—Fancy white comb, 13-14c.; No. 1 white, 11-12c.; fancy amber, 10-11c.; dark, 8-9c. Extracted, white, 6-8c.; amber, 4-5c.; dark, 3-4c. Beeswax, 26c. Comb honey arriving freely and market overstocked at present.

Albany, N. Y., Dec. 31.—Fancy white, 12-13c.; No. 1, 11-12c.; fancy amber, 9-10c.; No. 1 dark, 8-9c. Extracted, white, 6-7c.; dark, 4-5c.

The receipts of both comb and extracted honey are very large, and prices are somewhat lower. We have an ample stock of all styles except paper cartons weighing less than a pound.

Indianapolis, Ind., Dec. 31.—Fancy white, 14-15c.; No. 1, 12-13c. Extracted, white, 6-7c. Beeswax, 22-25c. Demand is fair for grades quoted, but no demand for inferior grades.

Boston, Mass., Dec. 31.—Fancy white, 13-14c.; No. 1, 11-12c. Extracted, white, 6-7c.; amber, 5-6c. Beeswax, 25c.

Milwaukee, Wis., Dec. 31.—Fancy white, 14-15c.; No. 1, 12-13c.; No. 1 amber, 8-10c. Extracted, white, 6-7c.; amber, 5-6c.; dark, 4-5c. Beeswax, 22-24c.

New crop of honey begins to come forward. The demand is very poor and quotations almost nominal. Weather is very warm and the consumption of honey is very small. Plenty of fruit, and hence the appetite is satisfied with same in preference. Later on we expect an improved demand for honey of all kinds.

Cleveland, Ohio, Dec. 31.—Fancy white, 14½@15c.; No. 1 white, 12½@13c. Extracted, white, 6@7c.; amber, 4½@5½c. Beeswax, 22@25c.

There is not very much honey in our market. Selling rather slow. Demand beginning to be a little better. Think trade will be fair in this line this fall.

New York, N. Y., Dec. 31.—Fancy white, 11@12c.; fair white, 9@10c.; buckwheat, 7@8c. Extracted, white clover and basswood, 5@5½c.; California, 6c.; Southern, 50c. per gallon. Beeswax in fair demand at 26@27c. The market is quiet and inactive. Demand light and plenty of stock on the market.

Cincinnati, Ohio, Dec. 31.—Comb honey, best white, 10@14c. Extracted, 4@6c. Demand is slow; supply is fair. Beeswax is in fair demand at 22@25c. for good to choice yellow.

San Francisco, Calif., Jan. 13.—White comb, 10-11c.; amber, 7-8c. Extracted, white, 5-5½c.; light amber, 4-4½c.; amber colored and candied, 3½c.; dark tulle, 2½c. Beeswax, fair to choice, 23-25c.

Kansas City, Mo., Jan. 20.—Fancy white comb, 14c.; No. 1 white, 13@14c.; fancy amber, 12-13c.; No. 1 amber, 11-12c.; fancy dark, 10-11c.; No. 1, 8-9c. Extracted, white, 6-6½c.; amber, 5 5/8c.; dark, 4-4½c. Beeswax, 25c.

St. Louis, Mo., Dec. 30.—Fancy white, 14c.; No. 1 white, 12@13c.; fancy amber, 11@12c.; No. 1 amber, 10@10½c.; fancy dark, 9@9½c.; No. 1 dark, 7@8c. Extracted, white, in cans, 6@7c.; in barrels, 5@5½c.; amber, 4½@4¾c.; dark, 3½@4c. Beeswax, 26½@27c.

Baker stock of extracted honey, 4@5c.; stock very scarce. Fair receipts of comb. Beeswax in good demand.

Minneapolis, Minn., Dec. 31.—Fancy white, 11@12c.; No. 1 white, 10@11c.; fancy amber, 9@10c.; No. 1 amber, 8@9c.; fancy dark, 7@8c.; No. 1 dark, 6-7c. Extracted, white, 6@7c.; amber, 5@5½c.; dark, 4@5c. Utah white extracted, 5@5½c. Beeswax, 23@26c. Market fairly steady for comb and better for extracted than for some time.

Detroit, Mich., Jan. 9.—Fancy white, 13-14c.; No. 1, 12-13c.; fancy amber, 11-12c.; No. 1 amber, 10-11c.; fancy dark, 9-10c.; No. 1, 8-9c. Extracted, white, 5½-6c.; amber, 5c.; dark, 4-4½c. Beeswax, 25-26c.

Buffalo, N. Y., Jan. 22.—Fancy comb, 1-pound, is selling fairly well at mostly 10c.; occasionally 11c.; No. 1, 8-9c.; occasionally 10. Other grades, 8-4c., according to color and general condition. Extracted, 4-5c. Sales of any grade cannot be made fast unless prices are out in accordance.

List of Honey and Beeswax Dealers.

Most of whom Quote in this Journal.

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BATTERSON & Co., 167 & 169 Scott St.

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WM. A. SELSER, 10 Vine St.

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WILLIAMS BROS., 80 & 82 Broadway.

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Convention Notices.

NEW YORK.—The annual meeting of the Ontario County, New York, Bee-Keepers' Association will be held at Canandaigua, N. Y., Jan 29 and 30, 1897. The usual cordial invitation is extended to all interested in apiculture, especially to the bee-keepers of adjoining counties. RUTH E. TAYLOR, Sec. Bellona, N. Y.

IOWA.—The seventh annual meeting of the Eastern Iowa Bee-Keepers' Association will meet at Anamosa, Iowa, Feb. 10 and 11, 1897. A corps of experimenters have been doing special work in the apiary, and will report. Lay all cares aside, and come and enjoy the good things prepared for you. Andrew, Iowa. F. M. MERRITT, Pres.

WISCONSIN.—The Wisconsin State Bee-Keepers' Society will meet Feb. 3 and 4, 1897, in the Capitol Building, Madison. The meeting will be largely devoted to discussions of topics that are of present interest to Wisconsin bee-keepers. The editor of the American Bee Journal will favor the meeting by a valuable essay on marketing honey for 1897. The Secretary's report on foul brood and securing a law to suppress the disease, will be interesting. Any question desired to be discussed will be sent to the Secretary. Platteville, Wis. N. E. FRANCE, Sec.

ILLINOIS.—The annual meeting of the Illinois State Bee-Keepers' Association will be held at the State House, in Springfield, Feb. 24 and 25, 1897. The State Farmers' Institute meets the same week—including all the State live stock associations—and our Executive Committee, along with them, arranged for this date, in order that the Legislature might be in good working condition. (We all know what for.) There will be an effort made this winter to get a Pure Food Bill past, and that means bee-keepers want a hand in it, to see that the adulteration of honey shall cease FOREVER AND EVER. Two years ago we succeeded in getting an Anti-Adulteration Bill through the Senate, but it failed in the House, only for want of push. Let bee-keepers throughout the State impress upon their Representatives the importance of such a bill, and come to our meeting to refresh their minds on the subject.

Railroad rates will be no greater than a fare and a third, which will be announced later. Our programs will be issued along with the other State Associations named above. JAS. A. STONE, Sec. Bradfordton, Ill.

A Thermometer Free.—Warner's Safe Cure Co., of Rochester, N. Y., are sending out a limited number of accurate spirit thermometers graduated from 20 degrees below zero to 120 degrees above, and mounted on heavy 4x8 inch card board, in red and green, by mail, free to any address on receipt of 2 cents in stamps to pay postage. To be sure, this free distribution is intended to advertise the celebrated Warner's Safe Kidney and Liver Cure (see advertising columns) but, nevertheless, the thermometer will be found to be a useful as well as ornamental article for the home or office, and well worth the little trouble and expense of sending for it.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 30 cts. a card, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

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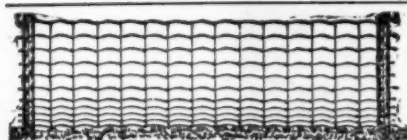
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50 Comb Honey Racks, to hold sections on the hive, flat, \$1.00 for the lot.

No. 3 VanDeusen Thin Flat-Bottom Fdn., in 25-lb. boxes, \$10.50 a box.

Wakeman & Crocker Section-Press, 50c each (old price, \$1.25).

Townsend Section-Press, 50c. (old price, \$1.)

Hill Feeders, quart size, 8c each, 75c per doz. (less than half old prices).

Hill Smokers, 40c each; by mail, 60c.

Quinby Smokers at 50c, 70c, and \$1.00 each—20c extra by mail.

Jones' Frame-Pliers, 10c each; by mail, 10c extra (old price, 25c and postage.)

1896 Dovetailed Hives at Special Prices.

Desiring to make room for new goods, we offer from stock at this branch, No. 1 Dovetailed hives, 8-frame complete, with sections, foundation-starters, and nails, at \$5.75 for 5; \$10.50 for 10; \$20.00 for 20; No. 1E, same without sections and starters, \$4.75 for 5; \$8.50 for 10; \$16.00 for 20; 10-frame complete, 20 cts. each extra; 10-frame E, 15 cts. each extra. Other Hives in stock at a similar reduction.

If wanted by Freight, add 25c for cartage on orders for less than \$5

THE A. I. ROOT COMPANY,

Geo. W. York, Manager.

118 Michigan Street, CHICAGO, ILL.